

Docket #71182

## ENDURABLE DECORATION LIGHT STRING

### FIELD OF THE INVENTION

[0001] The present invention relates to an endurable decoration light string. Especially, the present invention relates to a kind of design to provide an improved endurance of the decoration light string.

### 5 BACKGROUND OF THE INVENTION

[0002] When used, the present invention is able to provide decoration light string on both the head and tail ends and central parts to disallow getting loose and to ensure the stabilization of the transmission power as well as to increase the life span on the new design of the decoration light string.

10 [0003] Decoration light strings are commonly used in the soirée and celebration

occasions. The great joyous feeling or atmosphere can be relied upon on various decoration light strings to embellish the conference hall. Commonly known decoration light string no matter single or multiple wires in traditional style to arrange the conference hall or by using latest network lighting style to arrange the hall, they all have some parts which are not contacted well in many decoration light strings. This is especially true and commonly seen on both head and tail ends.

[0004] The main reason of such formation is the carelessness to pull and drag during the installing of the light string. Even through this will not affect the whole decoration light string to start, however, the vision result will be affected more or less so that it is unfortunately beautiful and yet incomplete.

## SUMMARY OF THE INVENTION

[0005] The purpose of the present invention is to provide an endurable decoration light string, and said light string is fixed on the predetermined fixed position of both the head and the tail ends and the central parts. The appropriate equipment can be installed to resist the draw force so as to increase the life span of the decoration light string.

[0006] A further purpose of present invention is to provide an endurable decoration light string by means of a non-electrical connector so that the draw force of the decoration light string will be firstly supported by non-electrical connector to avoid the damage on the decoration light string whereby to increase life time on the decoration light string. Further, the strength of the

draw force of the non-electrical connector is greater than that of single or multiple electrical conductors and the rate of extension is small than that of electrical conductor.

**[0007]** The present invention of the endurable decoration light string is including:

luminaries and electrical conductor, winding with parallel, series or series and parallel

5 connection. The characteristic is to use non-electrical connector parallel or winding to fix on the predetermined fixed position of both head and tail ends and center part of the decoration light string. To tie a knot on the predetermined fixed position to enhance endurable strengthen of decoration light string. Further, the winding of the decoration light string and the non-electrical connector is able to use non-electrical connector as an axis to wind the decoration light string.

10 **[0008]** According to the characteristic mentioned above, the strength of draw force of non-electrical connector is greater than one or more electrical connector. Further, the predetermined fixed position can be on the long trunk or separate area in the position of electrical conductor of on luminaries. However, the non-electrical connector can be composed of single wire, multiple wires or several connectors. When the non-electrical connector is composed of  
15 multiple wires and winding with several decoration light strings, the non-electrical connector and every decoration light string are to form round, triangle, rhombus, and square shape or predetermined pictures or words to make the luminaries on the electrical conductor becoming similar body shape surrounding.

**[0009]** Further, in the present invention of endurable decoration light string, another

characteristic is that when the multiple electrical conductors separate out to connect with the luminaries, the multiple electrical conductors on one side of long trunk can be a curve. Therefore, after tying a knot firmly with non-electrical connector, a buffering function is obtained. The electrical conductor will not be affected if the draw force is formed and the non-electrical connector will take the force instead of the electrical conductors.

**[0010]** The various features of novelty which characterize the invention are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and specific objects attained by its uses, reference is made to the accompanying drawings and descriptive matter in which a preferred embodiment of the invention is illustrated.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0011]** Figs. 1 and 2 are perspective views showing the example of non-electrical connector to tie a knot on electrical conductor and luminaries in endurable decoration light string of the present invention.

**[0012]** Figs. 3 and 4 are perspective views showing the example on the network shape of the single and twin wires non-electrical connector to tie the knots respectively in decoration light string of the present invention.

**[0013]** Fig. 5 is a perspective view showing the example on ring shape of the single and twin wires of the non-electrical connector to tie the knots respectively in decoration light string of the present invention.

[0014] Fig. 6 is a perspective view showing the example of on non-electrical connector attached leaf shape of decorating article in the endurable decoration light string of the present invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

5 [0015] Now referring to Fig. 1, an endurable decoration light string 1 of the present invention includes: electrical conductor 2, luminary 3 and non-electrical connector 4, in which, the electrical conductor 2 is of a predetermined length. In this drawing, a small section is illustrated for description purpose. Each of luminaries 3 connected on electrical conductor 2 is composed of lamp bulb 30 and lamp holder 31. Further, along with electrical conductor 2, the  
10 non-electrical connector 4 is parallel and winding with it, also fixing a knot on the long trunk of said electrical conductor 2. Thus, the strength of draw force of the decoration light string 1 can be enhanced.

[0016] Similarly, Fig. 2 (also showing a small section of the decoration light string 1) is showing that one non-electrical connector 4 is used in parallel winding, and make a knot on  
15 luminary 3 so that the strength of draw force of decoration light string 1 can be enhanced.

[0017] Also, referring Fig. 3, it is the network shape of the decoration light string 1. For the convenience of understanding, it is to take a small section for description purpose. It is composed of many electrical conductors 2, luminaries 3 and non-electrical connector 4 by means of parallel series interconnected into one unit. Further, every electrical conductor 2 located on a

side of the long trunk becomes a curve shape to save as a buffering function after taking a knot firmly with the non-electrical connector 4. However, on a few predetermined fixed positions, non-electrical connector 4 is used to wind and take a knot. The left side on the drawing is fixing a knot on electrical conductor 2 of long trunk, and then the right side is fixing a knot on luminary 3.

[0018] Therefore, when the draw force is applied to the light string, the non-electrical connector 4 is able to support it, and such draw force will not affect the electrical conductor 2.

[0019] Similarly, Fig.4 is network shape of decoration light string 1, in which two non-electrical connectors 4 to use to tie a knot with electrical conductor 2 of long trunk.

[0020] Fig. 5 is a ring shape type of decoration light string 1. Above said ring shape type of light string, it is composed of many electrical conductors 2, luminaries 3 and non-electrical connector 4 by means of series to interconnect into one unit. Using non-electrical connector 4 to wind with electrical conductor 2, the knots are taken on both the head and the tail ends of electrical conductor 2. Therefore, when the draw force is occurred, the non-electrical connector 4 is able to support it, and such draw force will not affect the electrical conductor 2.

[0021] Referring to Fig. 6, it is similar with endurable decoration light string 1 in Fig. 1 only to attach leaf shape of decorating articles on non-electrical connector 4. This can enhance the beauty of decoration light string. Also, one end is showing a long trunk to become a curve

shape on electrical conductor 2. Therefore, it has a buffering function when the non-electrical conductor 4 is knotted.

**[0022]** The features and preferred embodiments of the present invention have been described in the foregoing specification. The invention intended to be protected herein, however, is not to be construed as limited to the particular forms disclosed. Variations and changes, which maybe made by those skilled in the art, are with out departing form the scope of the present invention.